

**REMARKS**

**I. BACKGROUND**

In the Response filed September 18, 2008, applicant elected the claims of group II, directed to methods of using a translation products of an HMG protein gene as recited in original claims 1 and 3. Claims 1-91 have been cancelled and claims 92-101 have been added. The subject matter of the added claims corresponds to the matter recited in canceled claims 1 and 3, and the added claims are fully supported by the claims as originally filed and the specification.

Following entry of the amendments set forth above, claims 92-101 will be pending in the application.

In the pending office action the Examiner objected to claims 5-15, 19-29, 33, 35-44, 53-58, 62-63, 67-75, 79, 81-85 and 87-91 under 37 C.F.R. § 1.75(c) as being multiply dependent claims and withdrew them from consideration, relying on MPEP § 608.01(n). Applicant respectfully points out that MPEP § 608.01(n) states that multiply dependent claims are to be included in a restriction requirement, and that restrictions which would result in an embodiment within a claim being withdrawn from consideration are possible. § 608.01(n) does not permit the Examiner to withdraw claims without a proper restriction requirement. Rather, the aforementioned claims should have been restricted in the same manner as other claims, such as claims 1 and 3, 2 and 4, etc. and only the non-elected subject matter withdrawn from consideration. Accordingly, the Examiner must examine a claim to the extent that it incorporates the elected subject matter such as was done for claims 1 and 3.

**II. Rejection Pursuant to 35 U.S.C. § 112, Second Paragraph.**

The Examiner asserts that claims 1 and 3 are indefinite in failing to recite any steps in the methods recited therein. Claims 1 and 3 have been canceled and replaced with claims 92-101. The newly-added claims now delineate steps as requested.

In view of the foregoing, the rejection is now moot and Applicant kindly requests that it be withdrawn.

### **III. Rejection Pursuant to 35 USC § 101**

The Examiner alleges that claims 1 and 3 do not comply with §101 because the claimed methods do not recite the steps by which the process is to be performed. As discussed above, claims 1 and 3 have been canceled and replaced with claims 92-101. The newly added claims set forth steps for the methods of using a translation product derived from an HMG protein gene or fragment thereof, mooting the rejection. Withdrawal of the rejection respectfully is requested.

### **IV. Rejection Pursuant to 35 U.S.C. § 102(e)**

The Examiner argues that Bianchi teaches the use of HMG box binding molecules, or homologous molecules thereof, to treat vascular diseases which include, *inter alia*, angiogenesis. The Examiner further argues that Bianchi discloses the use of HMGB, and fragments thereof which correspond to the HMG box, and HMG box domains of other proteins belonging to the HMG family as therapeutic agents to facilitate and/or induce connective tissue regeneration. Thus, according to the Examiner, claims 1 and 3 are “clearly” anticipated by Bianchi. Applicant respectfully traverses.

Anticipation under § 102(e) requires that each and every element of a claim be found, either expressly or inherently, in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631 (Fed. Cir. 1987). Bianchi fails to teach each and every element of the claimed invention and, accordingly, cannot anticipate the instant claims.

A vascular disease “includes any condition that affects your circulatory system.” See, the attached, page 1, second complete paragraph, which is available on the Cleveland Clinic website (<http://my.clevelandclinic.org/heart/disorders/vascular/whatis.aspx>), and is submitted concurrently herewith. Angiogenesis, on the other hand, is the generation of any blood vessel. Thus, one skilled in the art would understand that angiogenesis is not involved with vascular disease.

Moreover, the Examiner’s reliance on paragraphs [0096] and [0097] of Bianchi is misplaced. In the cited paragraphs Bianchi describes the ability of HMG proteins to positively regulate (facilitate and/or induce) connective tissues. These processes are quite distinct from the claimed methods of promoting angiogenesis, which occurs in endothelial cells, and not in connective tissue.

Finally, Applicant respectfully notes that he is acknowledged as being the first to recognize that HMG proteins are “angiogenic switch molecules.” See, Schlueter *et al.*, American Journal of Pathology, vol. 166, No.4, pp. 1259-1263 (2005)(submitted concurrently herewith). This finding has been recognized by other scientists in the field as evinced by van Beijnum *et al.*, Angiogenesis, (2008)(submitted concurrently herewith). Attention is directed to the passage on the second page, left column which states:

In 1999, HMGB1 was recognized as a proinflammatory cytokine that mediates endotoxin lethality in mice [5]. Subsequently, its cytokine actions on hematopoietic and endothelial cells became subject to investigations [6,7], **but only recently has its involvement in angiogenesis been demonstrated [8,9].**

*Id.* (emphasis added). It is clear from the foregoing that Bianchi fails to teach, either explicitly or inherently, each and every element the claimed invention. Accordingly, Bianchi cannot anticipate the instant claims and withdrawal of the rejection respectfully is requested.

**V. Conclusion**

In view of the foregoing amendments and remarks, applicants respectfully submit that the application is in condition for allowance. Should the Examiner feel that there are any issues outstanding after consideration of this response; the Examiner is invited to contact the undersigned to expedite prosecution of the application.

The Commissioner is hereby authorized by this paper to charge any fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-3840. **This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).**

Respectfully submitted,



---

Paul M. Booth  
Reg. No.: 40,244

Date: June 22, 2009

**Proskauer Rose LLP**  
1001 Pennsylvania Avenue, N.W.  
Suite 400 South  
Washington, D.C. 20004  
Telephone: 202-416-6800  
Facsimile: 202-416-6899

Attachments:  
Form PTO/2b/08b  
Cleveland Clinic website printout  
van Beijunum *et al.*  
Schlueer, *et al.*